



**PROGRAM** : NATIONAL DIPLOMA  
SOMATOLOGY

**MODULE** : SCIENCE II

**CODE** : SCI 201

**DATE** : NOVEMBER 2016  
EXAMINATION

**DURATION** : SESSION 1  
09:00 – 12:00

**WEIGHT** : 50:50

**TOTAL MARKS** : 100

**EXAMINER** : MS KHUMALO

**MODERATOR** : MS DENATH

**PAGES** : 5

**INSTRUCTIONS:**

- This exam consists of 8 pages. Please verify that your paper is complete.
- Answer ALL questions.
- Read all the questions carefully.

**QUESTION 1**

Name the six **(6)** ideal properties of preservatives and antioxidants. (6)

[6]

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**QUESTION 2**

Name Four **(4)** active ingredients used in specialised treatment creams. (4)

[4]

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**QUESTION 3**

Name the four main components that most cosmetic preparations contain. (6)

[6]

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**Question 4**

Perfume can originate from three **(3)** sources. Name these sources and give an example of each. (6)

[6]

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**QUESTION 5**

Give five **(5)** reasons why it is important for a beauty therapist to have good knowledge of cosmetic chemistry. (5)

[5]

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**QUESTION 6**

Name Four **(4)** active ingredients used in specialised treatment creams. (4)

[4]

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**QUESTION 7**

7.1 All perfumes are made up of top, middle and base notes, elaborate on them (3)

7.2 Highlight three **(3)** sources from which perfumes originate, discuss each and give an example of each. (9)

[12]

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**QUESTION 8**

Discuss the difference between a **homogeneous** and a **heterogeneous** mixture (10)

[10]

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**QUESTION 9**

Complete the table by writing only the number and answer.

Vitamins	Skin effect of deficiency
Vitamin A	9.1
Nicotinic Acid	9.2
Witamin D & E	9.3
Vitamin C	9.4
Vitamin B2	9.5

[10]

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**QUESTION 10**

What is the difference between **Distillation** and **Desalination**? (4)

[4]

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**QUESTION 11**

*“Absorption through the skin is limited by numerous skin mechanisms”*

Highlight the factors. (4)

[4]

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**QUESTION 12**

Compare an **Alcohol**, an **Organic acid** and an **Ester** with each other. (9)

[9]

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**QUESTION 13**

Define the difference between an **organic** and an **inorganic acid** and give two (2) examples of each (6)

[6]

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### **Question 14**

Match the columns: write only the number and letter of the answer matching column A

**Example: 14.1 - Z**

<b>Column A</b>	<b>Column B</b>
<b>14.1.</b> Derived from the Comfrey root, Or synthesised from urea.	<b>A</b> SUBLIMATION
<b>14.2.</b> Resin used in the formation of Nail enamel.	<b>B</b> ISOPROPYL MYRISTATE
<b>12.3.</b> An extract of mint in alcohol.	<b>C</b> ACRYL SULPHONAMIDE
<b>12.4.</b> A Large, long chain molecular Protein.	<b>D</b> PETROLEUM JELLY
<b>14.5.</b> A purified semi-solid mixture of hydrocarbons obtained from Petroleum.	<b>E</b> HYDROQUINONE
<b>14.6.</b> Fat-like material produced Naturally in the epidermis.	<b>F</b> TALC
<b>14.7.</b> Purified magnesium silicate.	<b>G</b> SAPONIFICATION
<b>14.8.</b> An Agent that blocks the conversion of tyrosine to melanin in process of melanin pigment Formation.	<b>H</b> TITANIUM DIOXIDE
<b>14.9.</b> Crystalline acid from lemons And other fruit.	<b>I</b> ALLANTOIN
<b>14.10.</b> The process which involves The hydrolysis of a fat using	<b>J</b> CIRTIC ACID

An alkali to produce soap.	
<b>14.11.</b> Concentrated extracts of active ingredients, packed in individual glass vials	<b>K</b> PABA
<b>14.12.</b> A fine pink powder composed of a mixture of ferric oxide and Zinc carbonate.	<b>L</b> BORAX
<b>14.13.</b> Removal of the hair by means Of destroying the hair follicle.	<b>M</b> ELASTIN
<b>14.14.</b> The change in phase from a Solid to a gas.	<b>N</b> EPILATION
	<b>O</b> CALAMINE
	<b>P</b> AMPOULES
	<b>Q</b> CERAMIDES
	<b>R</b> MISCIBLE
	<b>S</b> METHANOL
	<b>T</b> DEPILATION

[14]

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**TOTAL: [100]**